

Meeting BPM IFIC

Project meeting - 24th of February 2026

Juan Carlos Fernández Ortega, Laura Karina Pedraza, Daniel Esperante, Nuria Fuster
Martínez, Marçà Boronat, César Blanch, Daniel González
juancarlos.fernandez@ific.uv.es

TABLE OF CONTENTS

01

Readout BPM avances

02

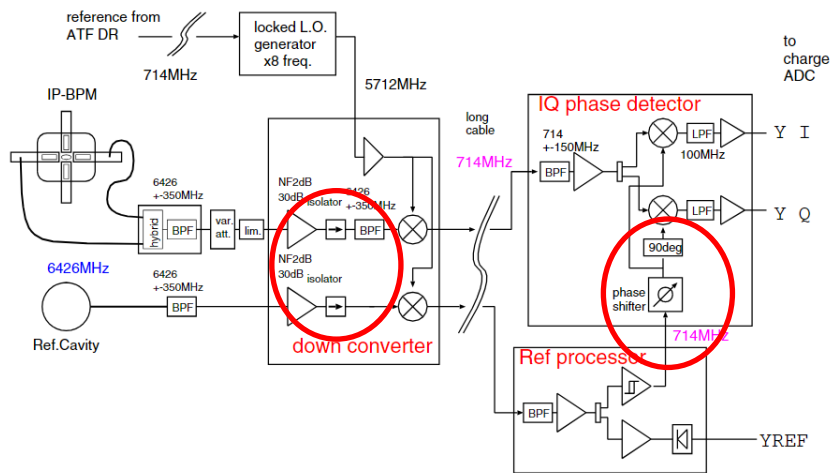
Diseño nueva línea

03

Lista componentes

1. Readout BPM advances

Isolators



Development of a high-resolution cavity-beam position monitor
Yoichi Inoue

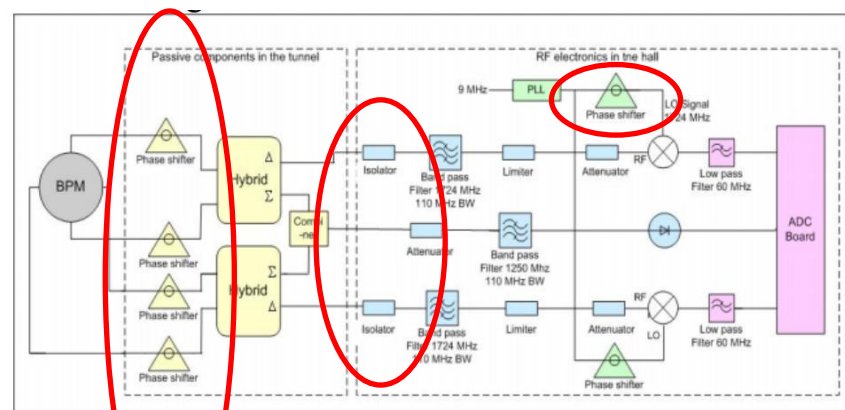
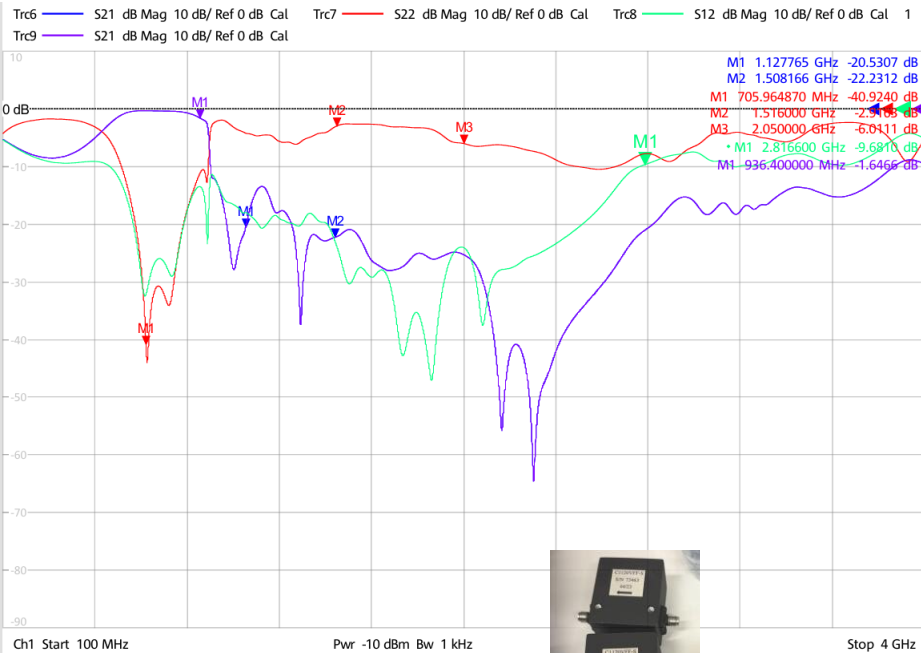


Figure 2: Signal processing electronics.

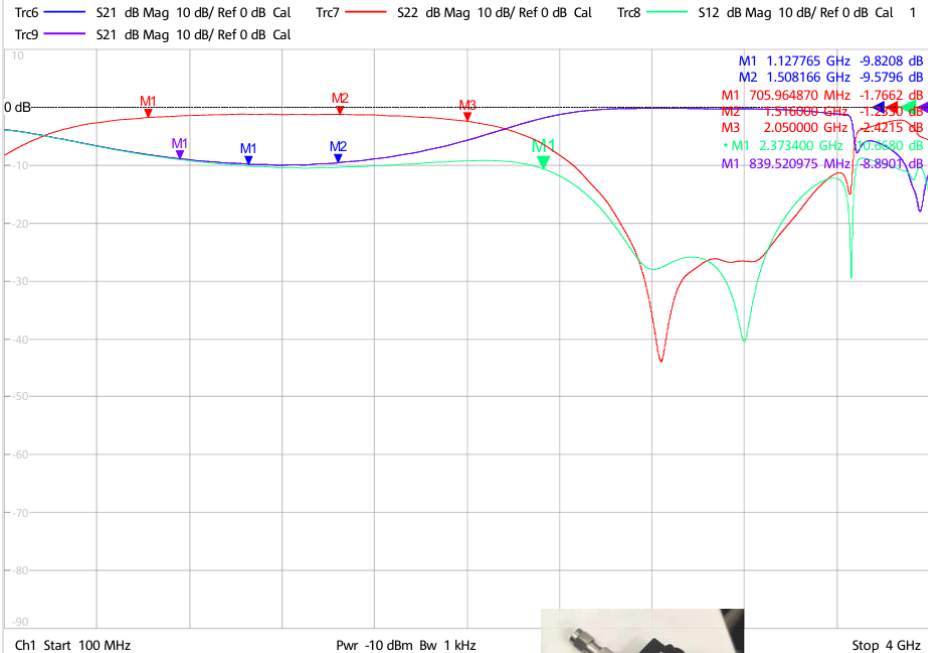
Saclay Paper
Claire Simon

1. Readout BPM avances

Isolators



x6



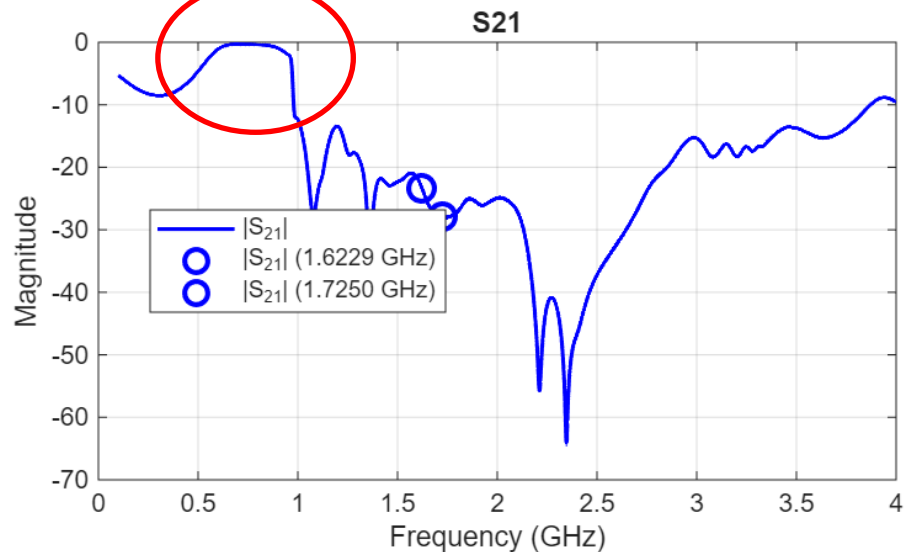
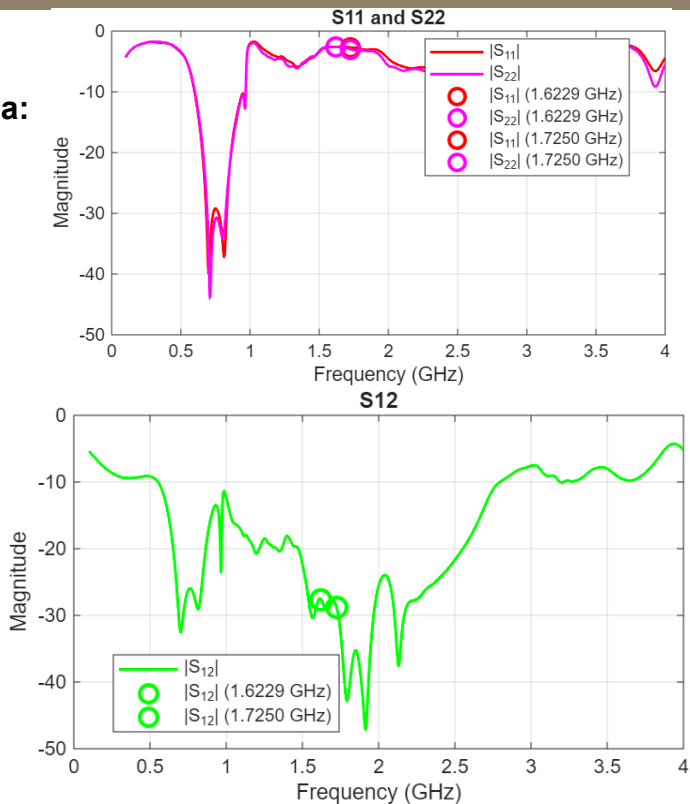
x1
4

1. Readout BPM avances

Isolators



Rango de frecuencia:
0.5 – 1 GHz

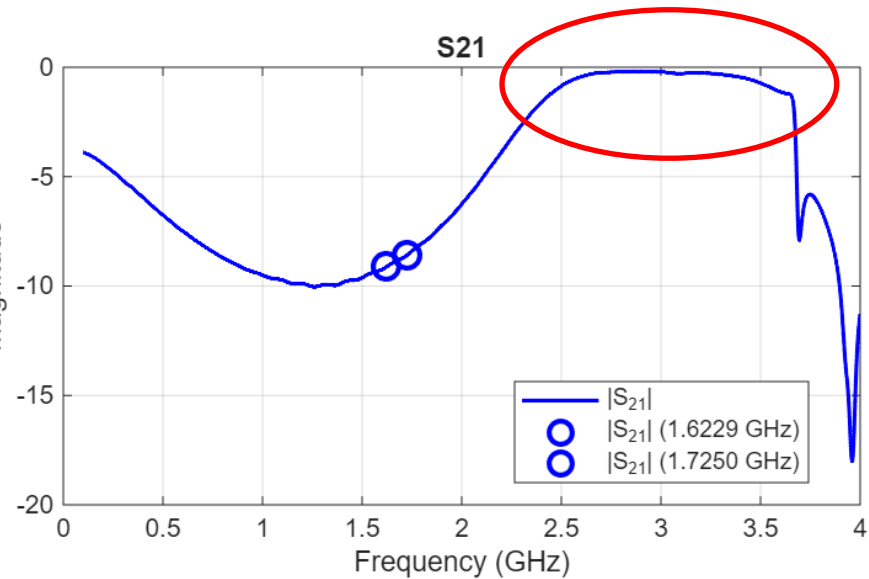
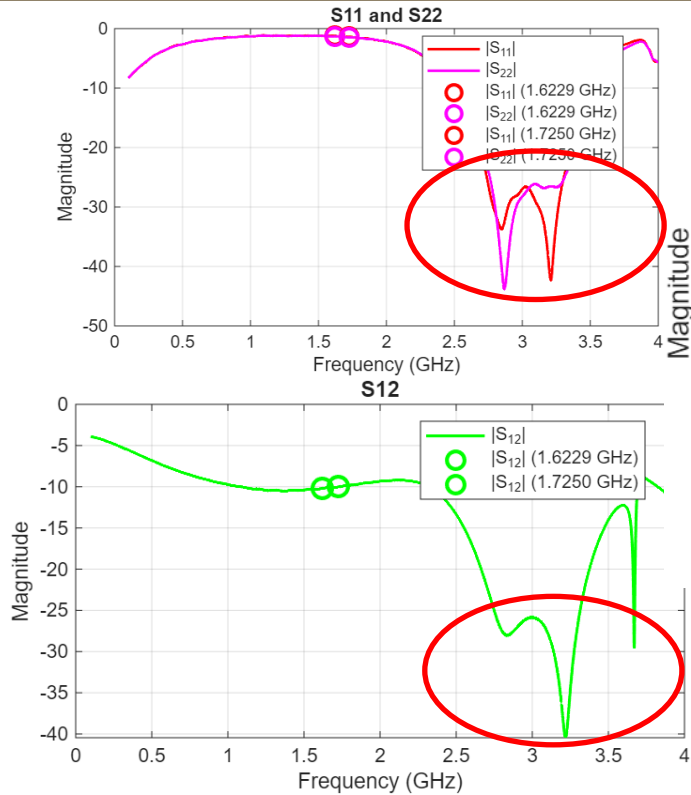


1. Readout BPM avances

Isolators



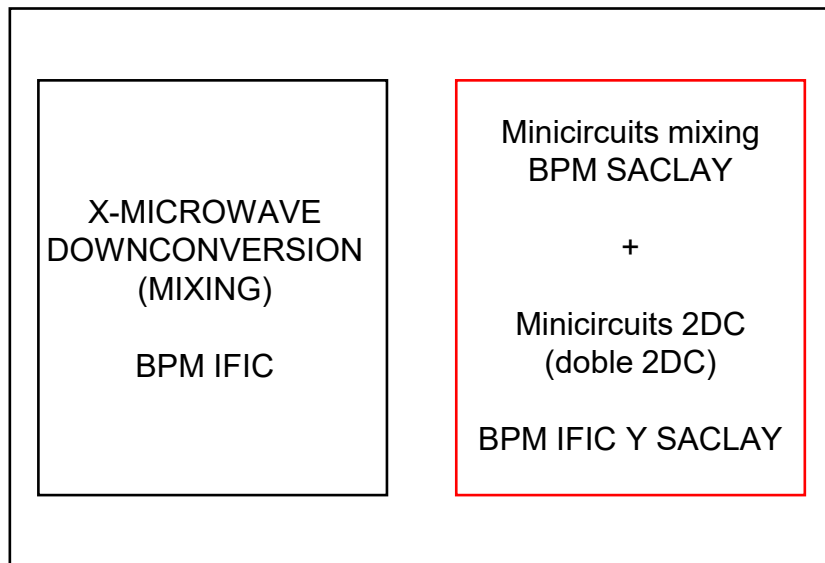
Rango de frecuencia:
2.5 – 3.5 GHz



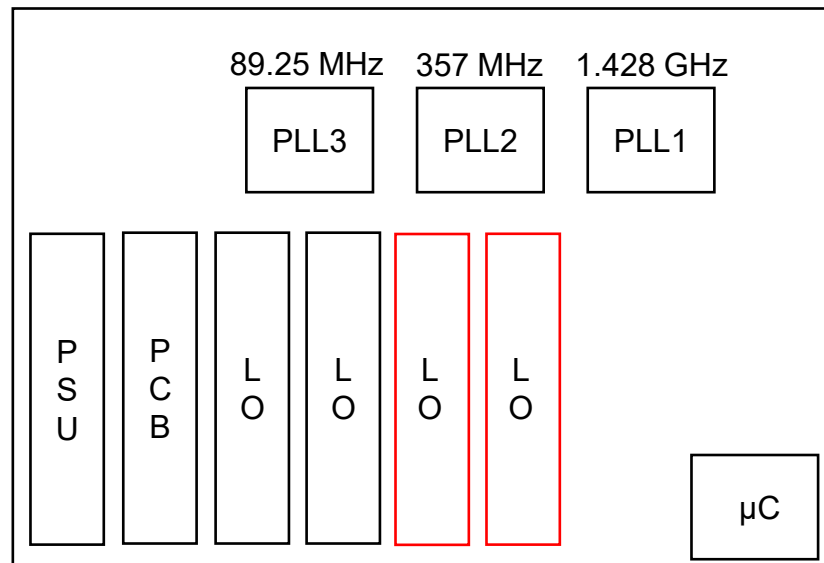
2. Diseño nueva línea

Línea BPM IFIC (2 BPMs)

Downconversion (crate 1)



Local Oscillator (crate 2)



3. Lista de componentes

BPM Esencial

ESENCIAL											
Device	Company	Part number	BPM	Frecuencia op (MHz)	Gain	Conexión	LAB	Quantity	Quantity	Price EUR (Estimation)	Estimated total price EUR
RF											
LPF	MINICIRCUITS	SLP-250+	IFIC			SMA			1	51	51
LPF	Quantic X-Microwave	433-XR-A6M8-0204D	IFIC			SMD			3	73	219
IC VOLT REG	Quantic X-Microwave	433-XR-A2J9-0404D-SP	IFIC			SMD			3	98	294
SCREWS	Quantic X-Microwave	433-XMSHCS172-187-01	IFIC			SMD			50	0,29 €	14,3
SCREWS	Quantic X-Microwave	433-XMSHCS172-375-01	IFIC			SMD			100	0,229	22,9
SCREWS	Quantic X-Microwave	433-XMSHCS172-625-01	IFIC			SMD			100	0,46 €	45,8
2DC											
SPLITTER 1:3	MINICIRCUITS	ZF3RSC-542-S+	IFIC y SACLAY			SMA			1	90	90
LPF	MINICIRCUITS	ZX75LP-176-S+	IFIC			SMA			3	60	180
LO											
Breakboard	MOUSER	4473	IFIC Y SACLAY						2	12	24
										TOTAL	941,00 €

3. Lista de componentes

Doble BPM

2BPM	Company	Part number	BPM	Frecuencia op	Gain	Conexión	LAB	Quantity	Price EUR (Estimation)	Estimated total price EUR
BPM IFIC										
RF 1.6 GHz										
Phase Shifter	MINICIRCUITS	SMP2018	IFIC			SMA		1	440	440
Hybrid	MINICIRCUITS	JSO-01-465/25	IFIC			SMA		2	250	500
BIAS CONTROLLER	Quantic X-Microwave	XR-A8E5-0604D-SP	IFIC					1	151	151
LO 1.4 GHz										
2DC										
RF 198 MHz										
LPF	MINICIRCUITS	VLFX-225+	IFIC			SMA		4	40	160
LPF	MINICIRCUITS	SLP-200+ OR SLP-130+	IFIC			SMA		3	50	150
LO 89.25 MHz										
SPLITTER 1:3	MINICIRCUITS	ZFRSC-42-S+	IFIC			SMA		1	80	80
IF 100 MHz										
LPF	MINICIRCUITS	SLP-100+	IFIC Y SACLAY			SMA		2	50	100
BPM SACLAY										
RF 1.7 GHz										
DSA	MINICIRCUITS	ZX76-15R5A-PNS+	SACLAY			SMA		3	100	300
BPF	MINICIRCUITS	ZX75BP-1940-S+	SACLAY			SMA		2	75	150
MIXER	MINICIRCUITS	ZEM-4300+	SACLAY			SMA		3	117	351
LO 1.4 GHz										
BPF	MINICIRCUITS	ZX75BP-1500-S+	SACLAY			SMA		1	100	100
SPLITTER 1:3	MINICIRCUITS	ZB3PD-2400W-S+	SACLAY			SMA		1	130	130
2DC										
RF 297 MHz										
Mixer	MINICIRCUITS	ZX05-10L-S+	SACLAY			SMA		3	50	150
LO 357 MHz										
PLL	TEXAS INST.	LMX2592EVM	SACLAY			SMA		1	400	400
SPLITTER 1:3	MINICIRCUITS	ZFRSC-42-S+	SACLAY					1	80	80
IF 60 MHz										
LPF	MINICIRCUITS	SLP-60+	SACLAY					1	50	50
TOTAL									3292	3292

3. Lista de componentes

Cables y carriles

Otros										
Cables	MINICIRUITOS	141-6SM+						0	18	0
	MINICIRUITOS	141-8SM+						0	18	0
	MINICIRUITOS	141-1MSM+						13	30	390
	MINICIRUITOS	141-1.5MSM+						6	45	270
	MINICIRUITOS	141-0.5MSM+						2	25	50
Carriles	invent Schroff	2457848						1	10	10
									TOTAL	720
									TOTAL	4.953,00 €

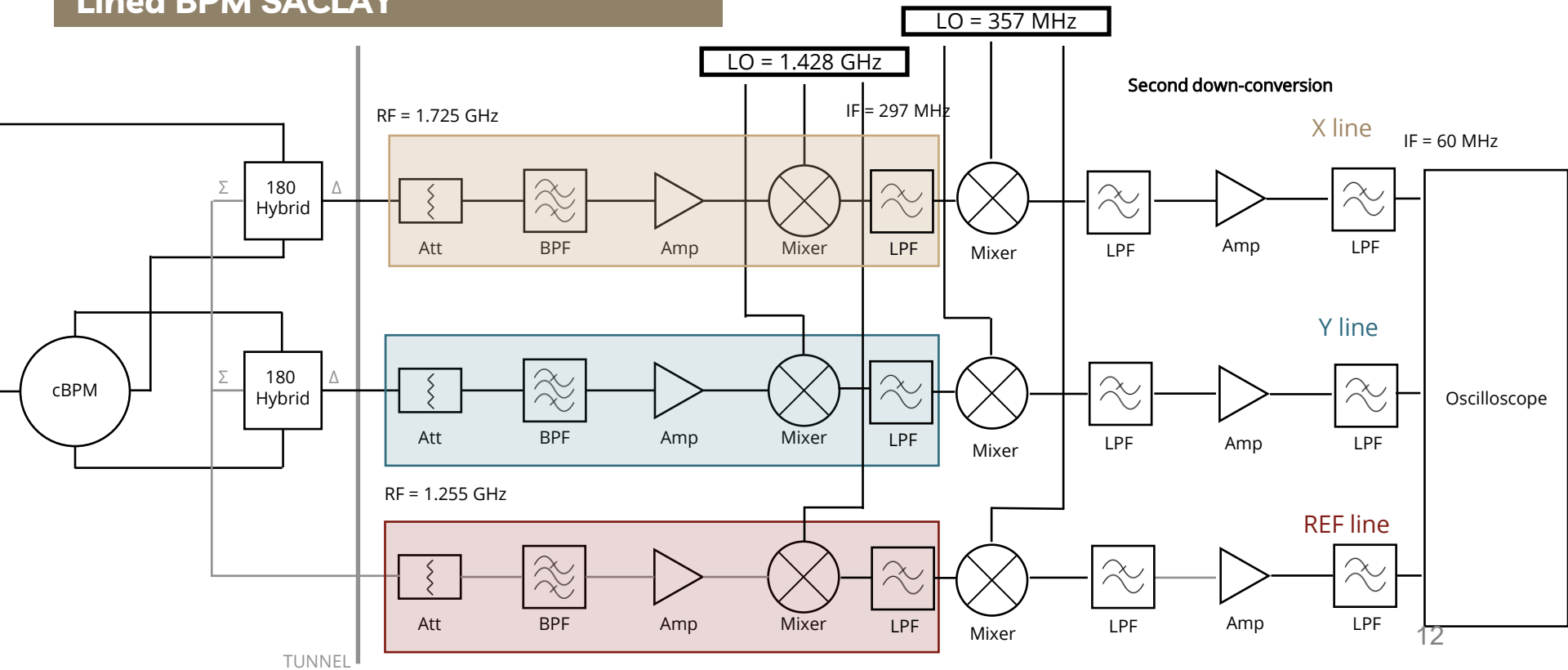
Meeting BPM IFIC

Project meeting - 24th of February 2026

Juan Carlos Fernández Ortega, Laura Karina Pedraza, Daniel Esperante, Nuria Fuster
Martínez, Marçà Boronat, César Blanch, Daniel González
juancarlos.fernandez@ific.uv.es

2. Diseño nueva línea

Línea BPM SACLAY

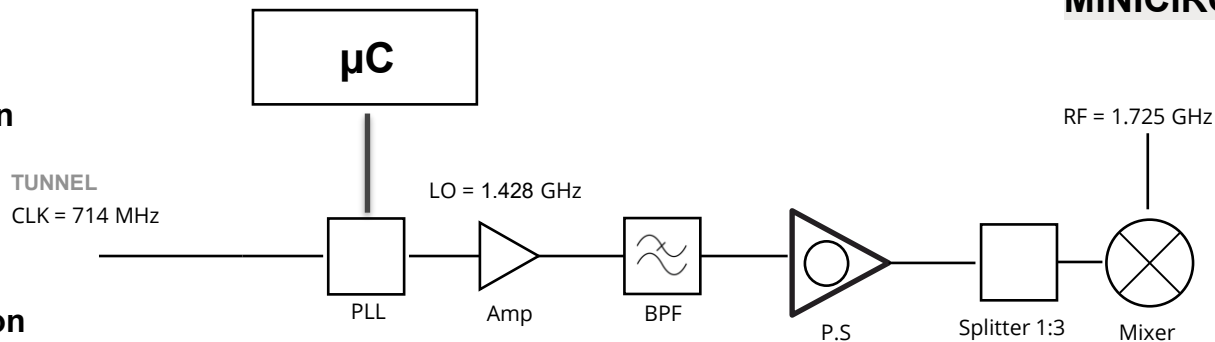


2. Diseño nueva línea

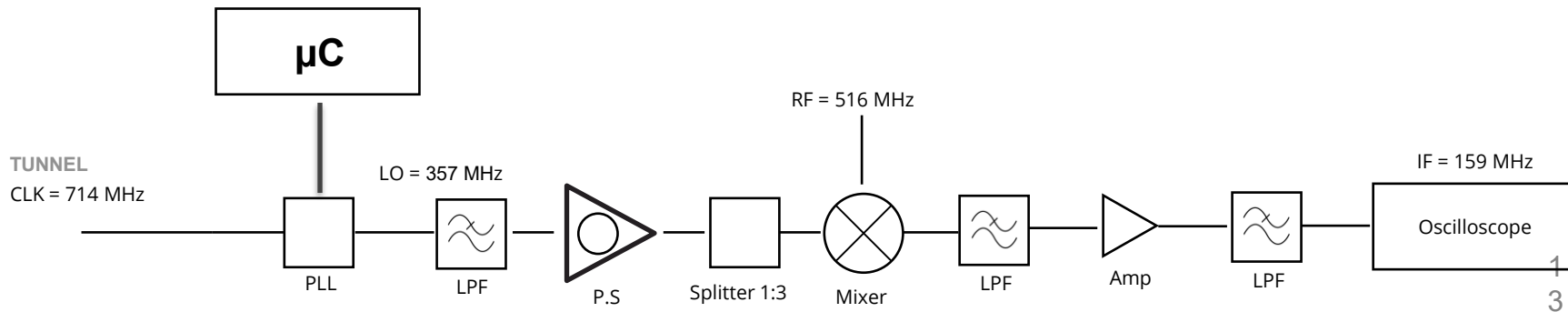
Línea BPM SACLAY

MINICIRCUITS

1st downconversion



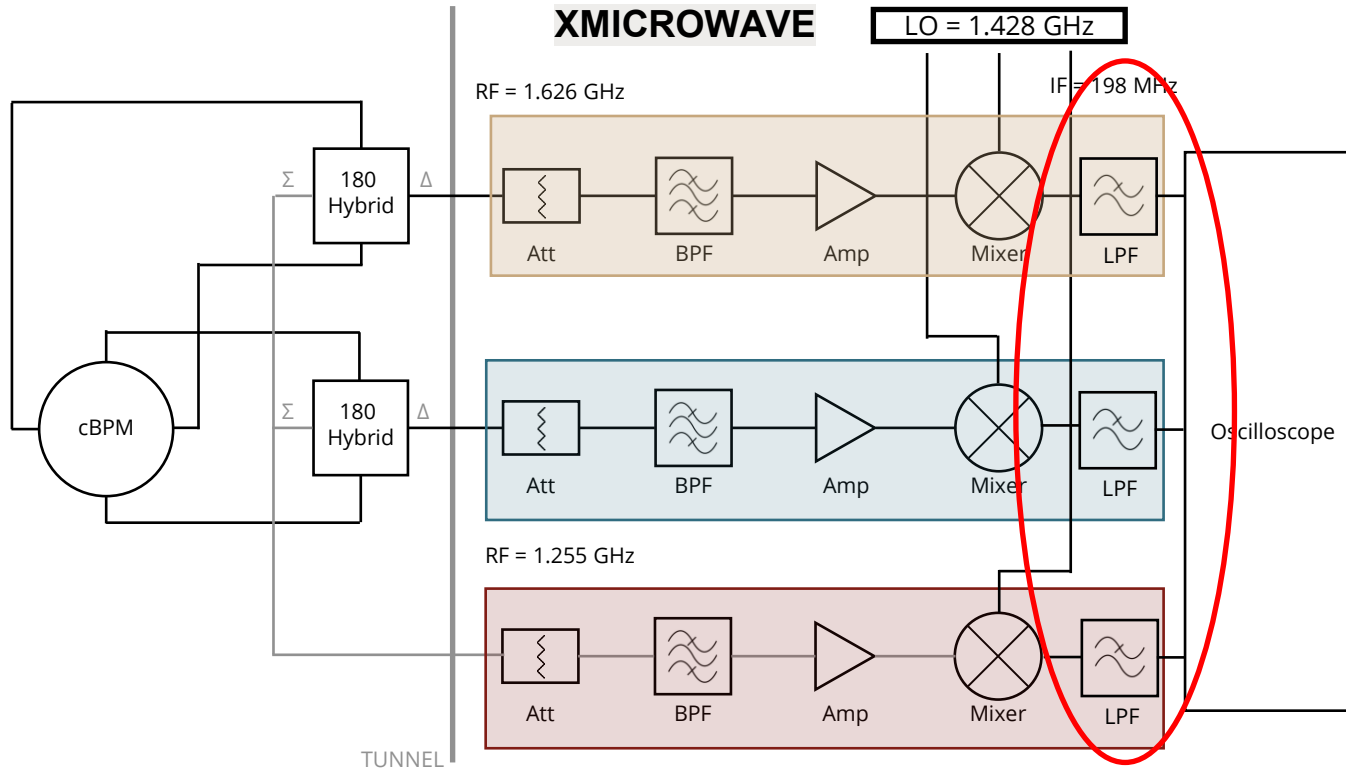
2nd downconversion



2. Diseño nueva línea

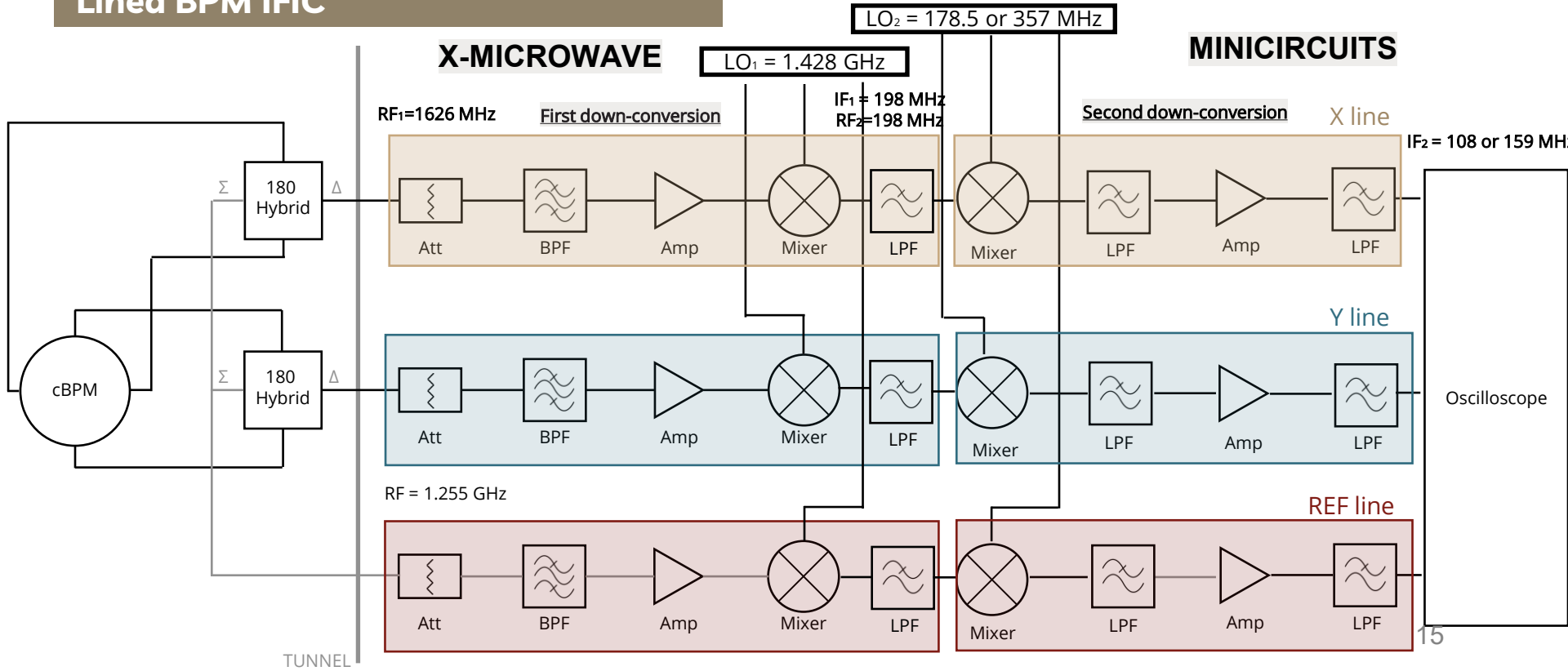
Línea BPM IFIC

Reutilizar X-MICROWAVE componentes



2. Diseño nueva línea

Línea BPM IFIC

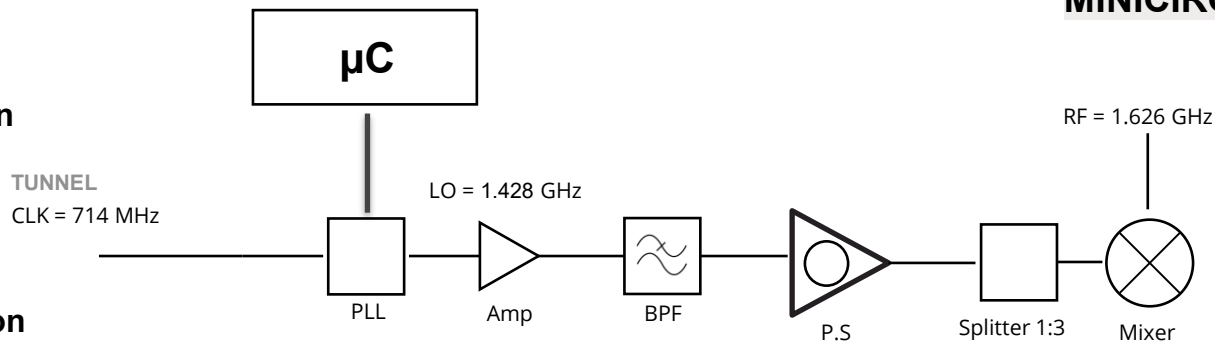


2. Diseño nueva línea

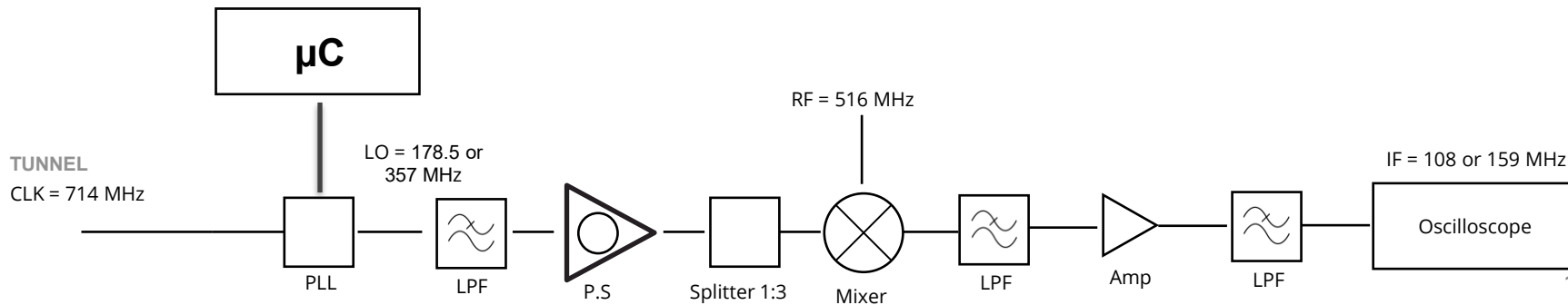
Línea BPM IFIC

MINICIRCUITS

1st downconversion



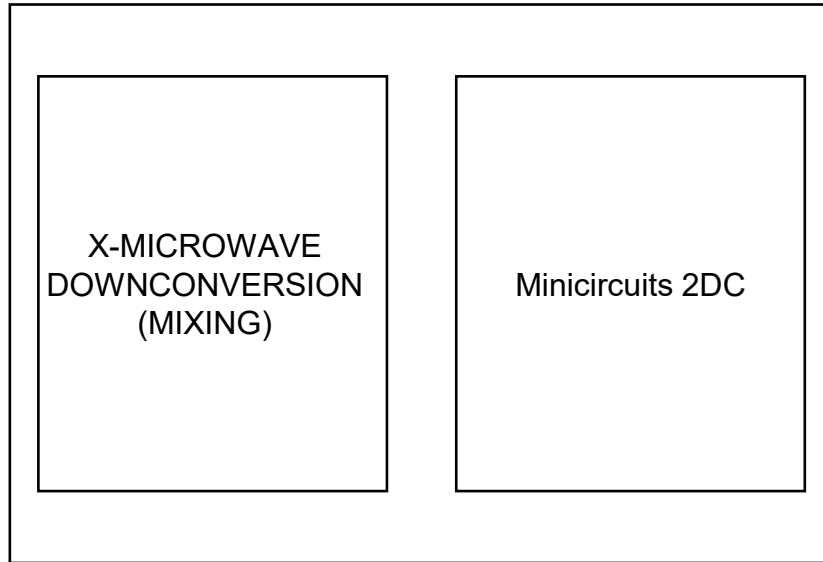
2nd downconversion



2. Diseño nueva línea

Línea BPM IFIC (1 BPM)

Downconversion (crate 1)



Local Oscillator (crate 2)

